HANDBOOK ON

MEDICAL ASSESSMENT

OF

CIVIL FLIGHT CREW

IN INDIA

(Please note that this document is for information purposes only and cannot be quoted as an authority)

FOREWORD

Civil Aviation in India is in the midst of a phase of rapid growth. Newer airlines are taking shape and the existing operators are expanding their fleets and domains of activity. At present there are about 4000 active commercial flight crew and an almost equal number of private licence holders in our country. In the coming years these numbers are set to grow steadily. Ensuring medical fitness of all flight crew is not just a requirement of the International Civil Aviation Organisation agreement, to which India is a signatory; it is a matter of considerable public interest and importance.

In India, medical examinations for all commercial flight crew are conducted at designated Indian Air Force Medical Centres, whereas for private licence holders medical examinations can be conducted by DGCA approved Class II Aviation Medical Examiners. All medical examinations are conducted in accordance with ICAO Standards & Recommended Practices (Annex 1). However, ICAO medical standards are not elaborate in several fields. Towards ensuring standardisation in aeromedical disposal of flight crew with disease/ disabilities it is imperative that all centres and individual doctors be aware of existing provisions in India. Doctors play a special role in ensuring continued medical fitness of flight crew at various stages. Periodic medical examinations for maintaining validity of licence are only one such area. Airline doctors play a crucial role in supervising follow up of flight crew with medical disabilities, when they are considered fit with limitations or specific recommendations.

This Handbook on Medical Assessment of Civil Flight crew in India has been prepared to serve as a guideline to all doctors associated with civil aviation in India. It addresses medical assessment and standards for civil flight crew and also highlights the role and responsibilities of doctors in Civil Aviation. I am confident that it will be very useful to all airline doctors, Indian Air Force Medical Officers and Class II Aeromedical Examiners in India.

New Delhi
15 March 2005

(Mrs. P Bandopadhyay)
Air Marshal
Director General Medical Services (Air)

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CHAPTER - I

GENERAL INSTRUCTIONS

Introduction

1. The International Civil Aviation Organization was created to promote the safe and orderly development of civil aviation in the world. A specialized agency of the United Nations, it sets international standards and regulations necessary for safety, security, efficiency and regularity of air transport and serves as the medium for cooperation in all fields of civil aviation among its 185 contracting states. India is a signatory to the ICAO convention and hence is committed to adopt at the minimum the ICAO Standards and Recommended Practices (SARPs).

2. These SARP regulations have been promulgated in Annexes to the Convention that are amended from time to time when necessary. Each Annexure deals with a specific aspect of international civil aviation. Aviation medicine is included mainly in Annex 1 (Personnel Licensing) and to some degree in Annex 2 (Rules of the Air) and Annex 6 (Operation of Aircraft).

Standards and Recommended Practices are defined as follows:

(a) **Standard.** Any specification for physical characteristics, configuration, materiel, performance, personnel or procedure, the uniform application of which is recognized as necessary for the safety or regularity of international air navigation, and to which Contracting States will conform in accordance with the Convention. In the event of impossibility of compliance, notification to the council of ICAO is compulsory under Article 38.

(b) **Recommended Practice**. Any specification for physical characteristics, configuration, materiel, performance, personnel or procedure, the uniform application of which is recognized as desirable in the interest of safety, regularity or efficiency of international air navigation, and to which Contracting States will endeavor to conform in accordance with the Convention.

Different types of licenses

3. Since the early days of aviation, States have recognized the necessity to check the proficiency of personnel who perform activities, which unless performed properly, could jeopardize the safety of aviation. Issuing a license generally made the recognition of this competency. There are different types of licenses. Each one grants specific privileges to the holder.

(a) **Pilot's Licenses**

(i) **Student Pilot.** While it is not formally a license, many Contracting States issue a waiver allowing a student pilot to fly solo before licensing. The medical fitness when applicable is often the least restrictive of all pilot licenses (Class 2). Therefore the medical examiner should be prepared to counsel the applicant against further time and expense in pursuance of piloting ambitions if a medical condition is established which might prevent his acquisition of a more senior pilot license.

(ii) **Private Pilot License - aeroplane (PPL - aeroplane).** The most commonly held license permitting the holder to fly an aeroplane other than professionally. Private pilots usually fly small aeroplanes in visual flight conditions.

(iii) **Private Pilot License - helicopter (PPL - helicopter).** This is the helicopter license equivalent to the PPL - aeroplane.

(iv) **Glider or Micro Light Pilot License.** The glider pilot license permits the holder to act as pilot-in-command of any glider.

(v) **Free Balloon Pilot License.** The holder of this license is permitted to act as pilot-in-command of any free balloon. This license is not in common use.

(vi) **Commercial Pilot License - Aeroplane (CPL - aeroplane).** The CPL is the most junior license permitting the holder to perform professional duties either as a pilot-in-

command of an aeroplane up to 5700 kg maximum take-off mass or as co-pilot of any aircraft.

(vii) **Commercial Pilot License - Helicopter (CPL - Helicopter).** This license is the helicopter equivalent to the CPL - aeroplane. In India commonly referred to as CHPL.

(viii) **Senior Commercial Pilot License - Aeroplane (SCPL - aeroplane).** The license permitting the holder to perform professional duties either as pilot-in-command of aircraft up to 20,000 kg maximum take-off mass or as co-pilot of any aircraft. Not issued any more in India.

(ix) **Airline Transport Pilot License - Aeroplane (ATPL - aeroplane).** The most senior pilot license permitting the holder to operate any aircraft either as pilot-in-command or co-pilot. The privileges of the instrument rating are included in the ATPL - aeroplane. In India commonly referred to as ALTP.

(x) **Airline Transport Pilot License - Helicopter (ATPL - helicopter).** The helicopter equivalent of the ATPL - aeroplane. The instrument rating privileges, however, are not included in the license. In India commonly referred to as ALTP (H) or ATPH.

The CPL, SCPL and ATPL for aeroplanes and helicopters are often referred to as professional or commercial licenses.

(b) **Licenses for flight crewmembers other than pilot**

(i) **Flight engineer.** The license permitting the holder to perform the duty of a flight engineer when required by aircraft certification or operational regulation.

(ii) **Flight navigator.**

(iii) **Flight radio operator.**

These licenses are also in the professional category, however these licenses, especially the last two are becoming obsolete and are seldom issued.

(c) **Licenses for personnel other than flight crewmembers**

(i) Air traffic controller license. The license in itself carries no privileges. These are conferred with additional ratings to the license that actually characterizes the duty of an air traffic controller. In India, the DGCA does not issue licences for Air Traffic Controllers, as of now. Medical examinations are conducted by DGCA approved Class II/ III aeromedical examiners under the aegis of the employers – The International Airports Authority of India.

(d) Annex I has provisions for other licenses (aircraft maintenance mechanic, aeronautical station operator and flight operations officer). However, these licenses have no medical fitness requirement due to the nature of duties.

Regulatory Authority

4. In India the regulatory authority is the Directorate General of Civil Aviation (DGCA) with its Headquarters at New Delhi. The Director General is responsible for all the activities of civil aviation in India and directly reports to the Secretary Ministry of Civil Aviation and to the Minister of Civil Aviation. Due to a pre-independence agreement, the IAF Medical Authorities have been allotted the role of conducting all Class I medical assessments and for laying down the Medical Standards for civil aircrew in the country. The DGMS (Air) is the Medical Advisor to the DGCA on all such medical issues. On behalf of the DGMS (Air) an IAF Aviation Medicine Specialist –JDMS (Civil Aviation) works as the medical assessor at DGCA and coordinates medical evaluation at the DGCA HQ.

Forms to be used

5. The initial issue medical examination is done on a special form designated as CA-34, all renewals are done on form CA-34A. The outcome of the medical examination is communicated to the aircrew on form CA-35. Based on the latter the DGCA then issues a Medical Assessment. The medical assessment is required to be carried along with the licence and it shows the current medical validity of the license holder. All medical documents are maintained at the DGCA in folders referred to as Previous Medical Records (PMRs). The PMRs are to be called for by the medical boarding centre prior conduct of the medical examination. The DGCA has now created a database of the summaries of medical records for all commercial flight crew and will be shortly making this data available to all IAF medical evaluation centres. This will preclude despatch of PMRs to and from DGCA.

Civil Aircrew Medical Examination Centres

6. The applicant must meet certain appropriate medical requirements, which are specified as three classes of Medical Assessment. The Licensing Authority issues the license holder with the appropriate Medical Assessment, Class I, Class II or Class III. Class I medical assessment is for holders of professional licenses, Class II medical assessments are applicable for all other flying licenses. A Class III medical assessment is for ATC Officers. The various requirements for each class are laid down in the medical standards.

7. There are in all 11 IAF Civil Aircrew Medical Examination Centres spread all over the country entrusted with the tasks of civil aircrew medical examinations for Class I medical assessments. These 11 centres are appended below: -

(a) AFCME, New Delhi

(b) IAM, Bangalore

(c) AFS Ambala

(d) AFS Barrackpore

(e) AFS Begumpet

(f) AFS Mumbai

(g) AFS Pune

(h) AFS Manauri

(j) AFS Tambaram

(k) AFS Jorhat

(l) AFS Kanpur

8. A panel of Class II and III Medical examiners conducts all Class II & III medical examinations. These doctors besides having a basic MBBS degree recognized by the Medical Council of India also need to have done some training in the subject of Aviation Medicine. All medical examinations conducted at any IAF Civil Aircrew Medical Examination centres and also Class II & III medical assessments conducted by private doctors are subject to final assessment and approval by the JDMS (CA) on behalf of the DGMS (Air).

*(Note**:** Class II & III medical examinations can also be conducted by Class I centres, though such centres may refuse to entertain Class II & III medical examinations depending on workload and service exigencies).*

9. When an aircrew is declared temporarily or permanently unfit for issue or renewal of license, the reason for unfitness shall be clearly endorsed on the CA 34\34A and CA 35. One copy of the CA 35 shall be handed over to the individual and his/ her signature obtained as a token of having received the medical disposal certificate.

Currency of Medical Assessment

10. The duration of the period of currency of a Medical Assessment shall be in accordance with the provisions laid down by DGCA. In India the period of currency is listed below and shall begin on the date the CA 35 is issued by the medical examination centre. This is laid down in DGCA AIC 06 / 2001.

24 months for the student pilot license

24 months for the free balloon/microlite pilot license

24 months for the glider pilot license
(after age 40 will become 12 months)

24 months for the private pilot – aero plane/helicopter license
(after age 40 will become 12 months)

12 months for the commercial pilot – aero plane/helicopter license

(after age 40 will become 6 months)

06 months for the senior commercial pilot – aero plane/helicopter license

06 months for the airline transport pilot – aero plane/helicopter license

12 months for the flight navigator license

12 months for the flight engineer license

12 months for the flight radio operator license

24 months for the air traffic controller license

CHAPTER –2

ASSESSMENT OF CIVIL AIRCREW IN INDIA

The Indian Medical Standards

1. Two basic principles are essential when assessing an applicant's medical fitness for aviation duties namely:

(a) The applicant should be physically and mentally capable of performing the duties of the license or rating applied for or held.

(b) There should be no medical reasons, which make the applicant liable to incapacitation while performing duties; to a degree that flight safety might be jeopardized.

2. The Indian Medical standards have been defined by the Civil Aviation Requirement (CAR) Section 7, Flight Crew Licensing, Series C, Part-I, Issue 1, dated 26 August 1999 as contained in Appendix 'A' to this handbook.

3. The Indian Medical Standards as referred to in the CAR rely heavily on the provisions given in the ICAO Annexure 1. Details of aeromedical disposal of flight crew with disease/ disability are laid down in Aeronautical Information Circulars (AIC) issued by DGCA and Medical Information Circulars (MIC) issued by DGMS (Air). The AICs and MICs in force are to ensure standardisation of aeromedical disposal by various aeromedical centres as far as possible. These circulars basically exploit the flexibility clause of para 1.2.4.8 of Annex 1.

Scale of Equipment

4. For IAF Medical Evaluation Centres, a scale of medical equipment for conduct of these medical evaluations is provided. For this purpose scale 'Y' is authorized wherever medical board for civil aircrew is held.

CHAPTER -3

ROLE AND RESPONSIBILITIES OF DOCTORS IN CIVIL AVIATION

Introduction

1. Where a medical deficiency exists, the extent to which air safety is affected is the vital factor, rather than the extent to which failure to attain the medical requirements is capable of being compensated. In some cases the question of compensation for a deficiency will be irrelevant, for example where the risk is one of sudden incapacitation rather than inability to carry out a required task physically. In other cases, the ability to compensate, for example, for an orthopaedic dysfunction may be an important factor in the over-all assessment of the effect on flight and public safety. Previously acquired skill and experience may similarly be irrelevant or important to the over-all assessment of the safety risk. In India the DGCA has laid down the restrictions to be imposed on aircrew with certain disabilities, keeping in mind the picture of flight safety. Licensing Circular 1/2000 (Appendix D) issued by DGCA specifies on the restrictions in employment for flight crew with limitations due to medical reasons.

2. To ensure careful implementation of laid down policy it is vital that all concerned understand their own responsibilities as well as those of others in the existing medical system in India.

Role of Medical Assessor at DGCA

3. The Director General Medical Services of the Air Force [DGMS (Air)] is the medical adviser to the DGCA. On behalf of the DGMS (Air), the JDMS (CA) works as the medical assessor at DGCA. This specialist in Aviation Medicine scrutinises all medical records of flight crew and approves them on behalf of the DGCA. Complex cases requiring aeromedical decision-making including all cases of Permanent Unfitness, appeal cases and where the medical assessor disagrees with the opinion of aeromedical centres/ examiners are referred to the office of DGMS (Air) for final decision. The medical assessor is also responsible for processing requirements for amendments to

existing policy of aeromedical disposal in light of recent advances and ICAO policy. These amendments are issued by the office of DGCA/ DGMS (Air).

4. Apart from the primary role as mentioned above, the medical assessor is also responsible for the following:-

(a) Medical investigation of civil aircraft accidents.

(b) Facilitating Procurement of medical equipment and expendables for IAF aeromedical centres from DGCA.

(c) Approving civil doctors who have undergone a certified course in Aviation Medicine on the DGCA Class II Aeromedical Examiners panel and reviewing this approval from time to time.

(d) Organising expert lectures/ CME programs in Aviation Medicine for Airline Doctors and Class II aeromedical examiners through the DGCA.

(e) Maintaining and updating of the Medical hyperlink on the DGCA website. The DGCA website http://dgca.nic.in has a "Medical" hyperlink on the home page. The following information is available on this link:-

(i) Online information for Class I licence holders about:-

(aa) Action on request for transfer of PMR

(ab) Full details of Medical Assessment after approval at DGCA.

(ii) List of DGCA approved Class II & III Aeromedical Examiners with their addresses and telephone numbers (where provided).

(iii) Full text of relevant CAR/ AICs/ Licensing Circulars issued by DGCA.

Role of Airline Doctors

5. The Airline Medical Departments play a crucial role in ensuring continued medical fitness of their flight crew and ground crew. The role of the airline doctors in this area is vital for flight safety and safeguarding of public interest. The airline medical departments must ensure:-

(a) Medical fitness of all flight crew and ground crew engaged in flying operations. This entails daily pre-flight medical check ups and random breath analysis for alcohol.

(b) Conducting specific medical examinations as recommended by the DGCA medical assessment/ CA 35 issued by the IAF aeromedical centres e.g. periodic record of Blood Pressure, requirement of specific investigations sought at next medical review, and periodic weight record.

(c) To scrutinise the medical assessment of fitness issued by DGCA in respect of flight crew of the concerned airline. Permission for return to flying duties after period of unfitness is to be granted after necessary approval from DGCA has been obtained and perused by responsible medical officer of the airlines.

(d) Correct rostering of flight crew with medical limitations like "fit to fly as co-pilot only" or "fit to fly as P-I-C along with qualified experienced pilot only" in liaison with their respective Operations Department. (Refer Licensing Circular 1/2000 – Appendix B).

(e) Implementation of recommendations or medical advice given by the DGCA medical assessment/ CA 35 issued by IAF aeromedical centres e.g. mandatory wearing of specific corrective glasses and possession of spare set of glasses by such flight crew.

(f) To refer all cases of decrease in medical fitness noticed or reported among flight crew to the JDMS (CA) at DGCA, for decision regarding requirement for special/ review medical examinations at IAF aeromedical centres. In this regard the provisions of Para 4.5 and 4.6 of Civil Aviation Requirements (CAR), Section 7, Series 'C' Part I and Para 1.2.6.1 and 1.2.6.1.1 of Annex 1 of International Standards of ICAO should be complied with. In accordance with these provisions the privileges of aircrew should not be exercised the moment they are aware

of any decrease in their medical fitness. This is in the interest of public safety. It is incumbent upon the airline medical management to take steps to ensure that this is implemented.

(g) Training in Aviation Medicine for all airline doctors at Institute of Aerospace Medicine Bangalore. This is considered essential for all doctors to understand the nuances and critical areas in the Aviation environment. All airline doctors should be further encouraged to attend regular CME programs/ training courses in Aviation Medicine conducted by DGCA/ IAF/ Indian Society of Aerospace Medicine.

Role of Class II Aeromedical Examiners

6. DGCA approved Class II Aeromedical Examiners perform the very important function of medical examination of Student Pilots, Private Pilots, Glider Pilots, Balloon Pilots etc. All such doctors are required to undergo mandatory training in Aviation Medicine at IAM, Bangalore. The medical examinations performed by such aeromedical examiners are conducted for and on behalf of the Govt of India**.** It is therefore imperative that such medical examinations be conducted in a professional manner and with the greatest sense of integrity and fairness. All Class II aeromedical examiners must familiarise themselves with the laid down regulations governing the same.

7. Class II Aeromedical Examiners must possess a copy of ICAO Standards and Recommended Practices Annex 1. Chapter 6 of this document deals with Medical Provisions for Licensing. This document may be obtained on payment from:

Oxford Book and Stationery Co.

Scindia House
New Delhi 110001

or

17, Park Street
Kolkata

Tele: 011-23315308
Fax : 011-51517559

8. The DGCA issues Civil Aviation Requirements (CARs) and Aeronautical Information Circulars (AICs) on medical subjects from time to time. Similarly DGMS (Air) issues guidelines as Medical Information Circulars (MICs) to

Aeromedical Centres of the IAF for conduct of Class I medical examinations for professional flight crew. Relevant copies of the all such requirements and circulars are placed as appendices to this document.

9. Class II Aeromedical Examiners must record details of medical examinations of the flight crew meticulously on the relevant forms CA 34/ 34 A. Details of disease/ disability detected must be endorsed on the forms at appropriate columns on the forms. Opinion of concerned specialists should be attached to the medical examination forms. All investigation reports as required for initial and renewal medical examinations must be enclosed with the forms before submitting the same to the JDMS (CA) at DGCA Technical Centre, Opp Safdarjung Airport, New Delhi 110 003 for approval. In case of any doubts regarding fitness of a particular flight crew, no certificate of fitness may be given to the individual and flight crew may be informed that the office of JDMS (CA), DGCA, would communicate the final decision.

10. Prior to despatch of the medical examination forms to DGCA, Aeromedical Examiners must carefully check the forms for accuracy and completion. A checklist for initial medical examinations for award of SPL/ PPL on form CA 34 is as follows:-

(a) Ensure completion of Part I of the form by the applicant in your presence and countersign the same. Specially look for history of Epilepsy, Diabetes Mellitus and heart disease in the individual applicant or his parents/ siblings and investigate accordingly.

(b) Sign and stamp a recent photograph of the applicant in the space provided.

(c) Ensure meticulous completion of all columns in Part II of the form after medical examination. Individual specialist opinions for Ophthalmology and ENT are not mandatory, but if obtained, must be signed by the concerned specialist.

(d) Attach the following essential investigation reports :-

(i) Resting ECG with tracing

(ii) X Ray Chest PA View with film and report

(iii) Blood Hb, TLC, DLC report

(iv) Urine RE report

(v) Pure Tone Audiogram

(vi) Any other medical investigation conducted

(e) Attach copy of Cockpit Test Report issued by CFI of the Flying Club/ Academy.

(f) The following endorsements, (as applicable) under 'Findings and Recommendations of the Medical Examiner/Medical Board' on CA 34/ 34A should be made in RED ink :-

(a) Fit Class II/ III Medical Assessment

(b) Fit to fly as Pilot-in-Command along with Qualified Experienced Pilot

(c) Fit to fly as Co-Pilot only

(d) Temporary UNFIT for flying

(e) Permanently UNFIT for flying

11. Class II Aeromedical Examiners must advise the prospective flight crew about any borderline disabilities that they detect and which may preclude fitness for a Class I medical examination at a later date. Young individuals who want to take up a career in aviation as a flight crew should not assume that by meeting Class II medical examination standards, they will automatically be medically fit for commercial aviation licences as well.

12. Class II Aeromedical Examiners must regularly update their knowledge in the field of Aviation Medicine and keep abreast with any changes in policy issued by the DGCA. The doctors must attend national conferences in Aviation Medicine and CME programs in the subject conducted by DGCA/ IAF from time to time. On individual cases, the aeromedical examiners may consult the JDMS (CA) at DGCA on any working day between 1430 and 1700 hrs at:-

Joint Director Medical Services (Civil Aviation)
Office of the DGCA
DGCA Technical centre
Opp Safdarjung Airport
New Delhi 110 003.

Phone : 011- 24610629 (Direct); 011-24622495 Extn 312

Email: adgms.dgca@nic.in

CHAPTER 4

DISPOSAL OF SPECIFIC CASES AND SPECIFIC REQUIREMENTS

DISPOSAL OF CASES OF IHD

Reference: AIC 28/99 (including amendments No 1 & 2 issued in 2000 & 2004)

1. In light of the recent advances in our knowledge of coronary artery disease, its management and prognosis, and our accumulated data and experience, it has become necessary to review and revise the guidelines for the employability of aircrew with CAD. These guidelines are laid down in the following paragraphs.

2. Classification and criteria for diagnosis

(a) **IHD Asymptomatic**. ECG abnormality suggestive of IHD detected during routine examination in an asymptomatic individual.

(i) **Minimal/Insignificant CAD**. No single coronary artery lesion is greater than 50% of the diameter of the lumen. Lesions greater than 30% but less than 50% in more than one coronary artery or tandem lesion in the same artery will be assessed on case-to-case basis. A stress Technetium Scan test will be carried out if considered necessary.

(ii) **Significant CAD.** Any lesion in a coronary artery with 50% or more stenosis of diameter.

(b) **IHD-Angina Pectoris**

(i) **Stable Angina**. Angina that is usually precipitated by exertion. There should not have been any change in frequency or duration of angina or ease of relief of anginal pain during the past 60 days.

(ii) **Unstable Angina.** New onset angina/angina occurring with increased frequency or duration or angina at rest.

(iii) **Variant Angina (Prinzmetal Angina)**. Usually occurs at rest and ECG during the episode exhibits transient ST segment elevation.

(iv) **Angina with normal coronary arteries (Syndrome X).** Classical angina pectoris with normal epicardial coronary arteries as assessed by coronary angiography. Causes include inadequate vasodilator reserve, intramyocardial muscle bridges and small vessel coronary artery disease.

(c) **IHD-Myocardial Infarction**

(i) **Non-transmural (Sub endocardial infarction/non-q wave infarction)**. Individuals showing evidence of Myocardial muscle necrosis with elevation of serum cardiac enzymes during acute phase of illness and no evidence of pathological q wave on ECG.

(ii) **Transmural (Q-wave)**: Individuals showing evidence of myocardial muscle necrosis with elevation of serum cardiac enzymes during acute phase of illness and development of pathological q wave on ECG.

(d) **IHD- Post PTCA/CABGS.** Cases of IHD who have undergone Myocardial revascularisation procedure.

Assessment of IHD Cases

3. Aircrew with asymptomatic IHD clinical group (a) will be referred to AFCME only for complete cardiac evaluation. The following investigations will be carried out as considered necessary:

(a) Biochemical profile

(b) TMT

(c) Holter monitor ring

(d) ECHO Cardiography including Stress ECHO

(e) Stress MUGA

(f) Stress Thallium

(g) Coronary Angiography CART

4. <u>Disposal: IHD Asymptomatic</u>

(a) If CART is normal and there is no associated abnormality eg Hypertension, Hypertrophic Cardiomyopathy, Aortic valvular disease, Myocarditis etc the aircrew will be certified fit.

(b) Cases with minimal insignificant CAD will be certified fit with restriction to fly as PIC alongwith a qualified P2 only. All renewal medical examination will be conducted at IAM/AFCME only. These cases will undergo Stress thallium every year. CART may be repeated as indicated.

(c) Cases of significant CAD in whom myocardial revascularisation procedure is not indicated or not performed or who are advised only medical treatment, will be grounded. Cases requiring myocardial revascularisation procedures will be disposed as indicated later.

5. **<u>Disposal of IHD: Angina Pectoris.</u>** *All cases of angina as well as significant coronary artery disease will be observed on ground from the date of initial diagnosis for a minimum period of 12 months. They will be categorized as "temporary Unfit" in two spells of 06 months each. Thereafter, these will be assessed as per para 5 (a), (b) and (c) of AIC 28/99.*

(a) All cases of angina will be observed on ground for a minimum period of 12 months. Certification will be considered only after 12 months of the initial diagnosis provided the following criteria are met.

(i) Individual is asymptomatic and effort tolerance is normal.

(ii) Modifiable risk factors and complications, if any, are under control/stabilised.

(iii) Maximal TMT, Sress MUGA & Stress Thallium do not show evidence of reversible myocardial ischaemia.

(iv) Holter monitoring does not reveal any episode of silent myocardial ischaemia or significant arrhythmia.

(v) ECHO shows normal left ventricular function and no significant regional wall abnormality.

(vi) Not on cardioactive drugs.

(vii) CART and other hemodynamic studies show coronary arteries to be normal or with minimal\insignificant lesion.

(b) The diagnosis in such cases will need to be appropriately revised. Such cases will be certified fit to fly as PIC along with a qualified P2 only. These cases will be followed up annually at IAM\AFCME. Stress Thallium will be repeated every year and CART will be repeated as indicated.

(c) Aircrew with Angina Pectoris and significant CAD may be considered for up-gradation provided they have undergone myocardial revascularisation procedures. Disposal of these cases will be as given later. (Disposal after PTCA/CABGS)

6. **Disposal of IHD: Myocardial Infarction (Non-transmural as well as Transmural Myocardial Infarction).** Aircrew with Myocardial Infarction will be grounded. AFCME/IAM may on a case to case basis recommend cases of Myocardial Infarction for award of P1 status to fly along with a qualified P2 only (with any other specified restrictions) not less than 12 months after the episode provided all the following criteria are met:

(a) Individual is asymptomatic and his effort tolerance is normal.

(b) Modifiable risk factors and complications if any are corrected/stabilized.

(c) Maximal TMT, Stress MUGA, Stress Thallium scan does not show evidence of reversible myocardial ischaemia.

(d) Holter monitoring does not reveal any episode of silent Myocardial Ischaemia or significant arrhythmia.

(e) ECHO shows normal LV functions and no significant regional wall motion abnormality.

(f) *The following groups of drugs are permitted for consideration of flying fitness provided all other parameters are met as required:-*

(i) Dispirin

(ii) Statins/ fibric acid derivatives among lipid lowering drugs.

(iii) Permitted Anti-hypertensive drugs including diuretics, beta-blockers, ACE Inhibitors and Calcium Channel blockers in dosages as allowed.

(g) CART and other hemodynamic studies show coronary arteries other than the infarct related vessel to be normal or with minimal lesion

(h) These cases will be reviewed every 6 months at AFCME/ IAM .

7. <u>Disposal after Myocardial Revascularization Procedures.</u> *For those aircrew requiring revascularisation procedure, it will be mandatory to undergo the same within 1 year period from consideration of flying status.An aircrew unwilling and or not undergoing a revascularisation procedure in this period of 1 year will then be declared "Permanently Unfit" and no further review will be entertained with respect to this condition. For the observation period of 09 months post PTCA, the aircrew will be assessed as "Temporary Unfit" for 06 months followed by 03 months. For observation period of 12 months post CABG, the aircrew will be categorized as "Temporary Unfit" for two spells of 06 months each.* Selected cases fulfilling the laid down criteria will be considered for certification.

(a) **<u>PTCA</u>.**

(i) A minimum period of 9 months should have elapsed since the procedure. He should have remained aymptomatic and maintained functional class I (NYHA) for at least 6 months.

(ii) They should not have any associated disease like DM, Hypertension, Peripheral vascular disease or metabolic disorder. The modifiable risk factors should have been corrected.

(iii) There should be no evidence of significant reversible MI/arrhythmia/conduction defects appearing on TMT. The subject should satisfactorily complete a symptom free limited exercise ECG evaluation (usually Bruce stage 3 or more).

(iv) 24 Hours Ambulatory monitoring Holter should not reveal any significant arrhythmia, conduction defect or silent ischaemic episode.

(v) Radionuclide Venticulography should reveal normal ventricle size, shape and functions. Global left ventricle ejection

fraction should be normal i.e. more than or equal to 50% showing further rise with exercise.

(vi) Repeat CART not earlier than 8 months following procedure should show results of successful coronary angioplasty with no evidence of a re-stenosis. There should be no lesion restricting the luminal diameter to 50% or more in any epicardial artery.

(vii) Planar Thallium Myocardial Perfusion scan should reveal normal left ventricular size, absence of stress induced perfusion defect or washout abnormality in any part of myocardium.

(viii) Those cases who fulfill the above criteria will be considered fit for flying as P1 along with a qualified P2 only with any other restriction. They will be reviewed at least once in 12 months at AFCME. Investigations including Stress Thallium and CART will be carried out as considered necessary by the cardiologist of the establishment. Cases who have suffered a myocardial infarction will not be considered for flying till 12 months after the episode of infarction.

(b) **CABGS.** Aircrew who have undergone CABGS procedure may be considered for certification provided they meet the following criteria:

(i). Minimum period of 12 months should have elapsed since the procedure. He should have maintained functional class I (NYHA) for at least 6 months and had been on no cardioactive drugs except dispirin or persantin.

(ii) There should be no associated disease like Hypertension, DM, Peripheral vascular disease or metabolic disorder. All modifiable risk factors should have been corrected.

(iii) There should have been no significant left main stem stenosis (50% or above)

(iv) The subject should be able to complete a symptom-limited exercise ECG satisfactorily (usually Bruce stage 3 or more). It should not reveal reversible myocardial ischaemia, left ventricular dysfunction, significant arrhythmias or fresh conduction defects.

(v) Radionuclide Ventriculography should demonstrate an ejection fraction of equal or more than 50 %.

(vi) A Thallium scan should show no perfusion defect or LV Dysfunction.

(vii) Colour Doppler echography evaluation should reveal no structural disease of the heart, left ventricular dysfunction or significant regional wall motion abnormality.

(viii) Holter monitoring for 24 hours should not reveal any abnormality of rate, rhythm, and silent ischemic episodes.

(ix) Repeat CART with left ventriculography should objectively document all grafts patent, no significant proximal disease and no lesion of more than 50 % in the remaining ungrafted native circulation. Left ventriculography must demonstrate normal LV size, shape, contractility and functions. There should be no significant mitral regurgitation.

(x) Cases considered fit based on the above criteria would be certified fit P1 status to fly with a qualified P2 only with any other restriction. They will be reviewed at AFCME at least once in 12 months. Investigations including stress thallium and CART will be carried out as considered necessary by AFCME.

8. ***Minimum requirements for Follow up Investigations after award of Fitness.*** *The following minimum investigations will be required for follow up evaluation of such cases, after they have obtained medical fitness:-*

(a) 2D Echo Doppler and Exercise ECG every alternate year.

(b) SPECT Tc 99 every alternate year. (This will be done in the year when investigations under sub-para (a) above are not done).

(c) Coronary Angiography once every five years.

(d) Any of the above or other investigations when indicated.

Appeal Procedure

9. Aircrew declared unfit for flying due to IHD will have to apply to the DGCA for reconsideration, after the specified period of observation as laid down in this circular. *Aircrew declared temporary unfit for flying due to IHD will have to apply to DGCA for reconsideration not later than 12 months from initial detection/after revascularisation procedure which ever is earlier.* All such appeals shall be supported by the original or certified true copies of the complete medical record since the event (eg. onset of angina or other symptoms, detection of IHD during routine or special investigations and any operative procedure such as angioplasty/CABGS).

10. The appeal with the supporting documents shall be considered by DGMS (Air) and only on acceptance of appeal by DGMS (Air) it will be communicated in writing to DGCA. The previous medical record will be forwarded to AFCME/IAM for review. No direct review at any boarding centre is permitted in such cases.

11. Original records or authenticated video recordings of angiography; ultrasonography, Doppler study etc will have to be produced at the time of review at AFCME/IAM.

DISPOSAL OF CASES OF HYPERTENSION

(Reference: New AIC ../2005)

1. A blood pressure recording of 140/90 mm of Hg will be accepted as the upper limit of normal. Due attention should be paid to eliminate sources of potential error while recording blood pressure. Phase V of Korrotkoff sounds (disappearance) will be used to indicate diastolic pressure for purpose of uniformity. When the casual BP is elevated, the flight crew should be made to rest for one hour in a quiet room on a couch / bed. It should be ensured that no coffee, tea or cigarettes are consumed in the preceding one hour. If the second BP recording taken after an interval of one hour is also higher than normal, further action as per para 2 of this AIC should be taken.

2. Confirmation of Diagnosis. Confirmation of diagnosis of Hypertension will be made at Institute of Aerospace Medicine (IAM), Bangalore or Air Force Central Medical Establishment (AFCME), New Delhi only. Flight crew detected to have raised blood pressure during renewal medical examinations, at centres other than IAM/AFCME, will be referred to IAM/AFCME for further evaluation. The Senior Medical Officer of the renewing medical centre will get an urgent open appointment before referring them to IAM/ AFCME. Previous Medical Records (PMRs) of such flight crew will be forwarded to IAM/AFCME by speed post, under intimation to DGCA. Should such flight crew be unwilling to proceed immediately to IAM/AFCME for evaluation, they will be recommended to DGCA for declaring temporary unfit for flying for 08 weeks and reviewed thereafter at IAM/AFCME. At IAM/ AFCME the flight crew detected to have raised blood pressure will be subjected to 24 hours ambulatory BP recording and assessed on the next day for confirming the diagnosis of hypertension or otherwise. *For private license holders, Class II Aeromedical examiners may get the ambulatory BP recorded at a reputed centre and dispose the case accordingly. In case facilities for the same are not available, the individual should be declared temporarily unfit for flying for 08 weeks and advised next review at IAM/ AFCME only. Full details should be endorsed on the form CA 34/ 34A.and the same should be despatched by Speed Post to JDMS (CA) at DGCA, Opp Safdarjung Airport, New Delhi110003.*

3. Investigations & Assessment. All cases diagnosed as hypertension will be evaluated as per following guidelines: -

(a) Thorough physical examination (including history).

(b) Clinical examination to exclude secondary causes, if any.

(c) Thorough examination to establish/ exclude target organ involvement.

(d) The following investigations will be done :-

(i) Routine haemogram

(ii) Urine routine exam including microscopic

(iii) ECG resting

(iv) X-Ray Chest (Postero-Anterior View)

(v) Complete biochemical profile

[Blood Sugar (Fasting and 2 hours after 75 g of oral Glucose),
Urea, Uric Acid, Creatinine and Cholesterol with lipid profile]

(vi) USG Abdomen

(vii) Fundoscopy

(viii) Echocardiography

(ix) Any other relevant investigations, considered appropriate by the medical centre

4. Disposal of Flight Crew.

(a) If Ambulatory BP recordings are within normal limits, the flight crew will be declared fit for unrestricted flying. The next review for such flight crew should be at AFCME/IAM only. Flight crew will produce their monthly BP record taken by Authorised Medical Attendant (AMA) or company doctor at the time of review. Fresh 24-hour ambulatory BP record may be taken if deemed necessary by the medical centre.

(b) In case the flight crew is confirmed to have hypertension, he/she will be placed under observation as temporary unfit for flying for 08 weeks. During this period flight crew will be directed to the AMA/company doctor for investigations and treatment of hypertension. Subsequent disposal will be as follows :-

(c) Disposal After 08 Weeks of Temporary Unfitness.

(i) Flight crew who are asymptomatic, controlled with non-pharmacological measures only and without target organ involvement, can be considered fit for full flying duties including Pilot-in-Command (P-I-C), without limitations. All such flight crew will be required to undergo the next renewal medical examination at IAM/AFCME only.

(ii) Flight crew whose blood pressure is controlled with permissible drugs (as stipulated in paras 6, 7 & 8 of this AIC) with no involvement of target organs, may be recommended limitation of 'Fit to fly as co-pilot only' for 12 to 24 weeks. This is to ensure consolidation of control of BP, compliance of the drug regime and absence of side effects. All such cases will be reviewed at IAM/AFCME only. During the intervening period close supervision of the flight crew will be maintained by the AMA/ Company doctor. Periodical BP records will be maintained by the AMA and produced for perusal of the boarding centre. Subsequently these flight crew may be permitted graduated return to full flying duties (including P-I-C duties) without limitations, after reviews at IAM/AFCME.

(iii) Flight crew requiring more than two drugs for control of BP, or dosages higher than permissible limits or those who have target organ involvement will be recommended unfit for flying duties unless the situation reverses. In the latter case the flight crew may be reassessed for flying fitness, in a graduated manner.

5. Permissible Medication. Flight crew with symptom less and uncomplicated hypertension, where other secondary causes have been excluded can be started on anti-hypertensive drugs, provided stipulations under Para 6, 7 & 8 of this AIC are met.

6. When flight crew are advised any drug to control blood pressure by their treating physician, they will not exercise privileges of their flying license, until clearance is obtained for the same from IAM/AFCME and approved by the DGCA. Further upgradation will depend upon the medical reports and the course of disease. Such upgradation will be approved by DGCA on the basis of checks carried out at IAM/AFCME only. These cases will be reviewed at IAM/AFCME annually, till remitted.

7. The following anti-hypertensive drugs are permitted to be used for control of hypertension amongst flight crew:-

(a) Diuretics (other than loop diuretics like Frusemide).

(b) Cardio selective beta-blockers (up to 100mg/day).

(c) ACE inhibitors (Enalapril up to 20 mg/day) and ACE Receptor Blockers
(Losarten).

(d) Calcium channel blockers (Amlodipine only, up to a max dose of 10mg/day).

8. A combination of any of two groups of drugs will also be allowed.

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REQUIREMENT OF ROUTINE RESTING ECG, TMT, BIOCHEMICAL & LIPID PROFILE TESTING

Reference : AIC 4 / 95 and Air HQ/26523/11/Med-8 dated 29 Oct 2003

1. Resting ECG is required to be carried out as a part of Class I medical examination on all civil aircrew every 2 years between the ages of 30 and 40 years and every year thereafter. Resting ECG will invariably be conducted at the medical centre. At centres other than AFCME and IAM, the reporting of the ECG may be done by any of the following :-

(a) Service Av Med Specialist/Medical Specialist/Cardiologist.

(b) Cardiologist at Govt / Private Hospital or clinic.

2. The following additional tests will be carried out as part of a class I medical examination of civil aircrew.

(a) Stress Test

(i) Type of Test: Treadmill stress test – Maximal using Bruce Protocol

(ii) Periodicity: Every 5 years after reaching age of 35 years till 55 years, and every 2 years thereafter.

(b) Biochemical Tests

(i) Hb TLC DLC

(ii) Blood Urea

(iii) Serum Creatinine

(iv) Lipid Profile

(v) Blood Sugar Fasting & Post Prandial

(vi) Serum Uric Acid

(vii) Serum Bilirubin

(viii) SGOT/ SGPT

3. The biochemical profile tests should coincide with the periodic stress tests as laid down in para 2 (a) (ii) above.

4. Medical examinations of aircrew that are due for the tests listed at para 2 above will be conducted at AFCME/IAM only.

5. The TMT, Biochemical and Lipid profiles should be carried out under own/airline/flying club arrangement, preferably within a month prior to the due date of medical examination. The full records including the tracing of the TMT along with reports should be made available at medical examination, to be conducted at AFCME\IAM.

DISPOSAL OF SPECIFIC OPHTHALMOLOGIC CASES

Reference: MIC : 1/99 and amendment vide Air HQ/26523/11/Med-8 dated 11 Mar 04

1. Disposal Of Cases Undergoing Refractive Corneal Surgery. *Flight crew having undergone refractive surgery will be considered for medical fitness for flying on a case-to-case basis. Such cases will be examined only after a minimum period of six months after the procedure. Medical fitness for initial issue of licence may also be considered for such cases.*

2. Disposal of Cases after Cataract Surgery and IOL Implantation.

(a) Cataract Surgery by Small Incision: *Flight crew having undergone cataract surgery will be considered for medical fitness for flying on a case-to-case basis. In cases where such surgery is performed by phacoemulsification/ small incision, medical fitness with the limitation "Fit to fly as Pilot-in-Command along with qualified experienced pilot" may be considered after two months of surgery.*

(b) Cataract Surgery by a Full Incision: Cases who have undergone full cataract incision will be kept in non-flying status for a period of 06 months. Thereafter, restricted flying category will be given for 03 months depending on the clinical state. At the next review i.e. 09 months pos-operatively, an award of unrestricted flying status may be considered if found fit.

Appendix 'A'
(Refers to para 2. Chapter 2)

CIVIL AVIATION REQUIREMENTS, SECTION – 7, FLIGHT CREW STANDARDS, SERIES C, PART 1, ISSUE – 1, DATED 26 August 1999

MEDICAL REQUIREMENTS AND EXAMINATION FOR FLIGHT CREW LICENSES AND RATINGS

1. Introduction. Rule 39B of the Aircraft Rules, 1937 regarding Medical Standards of flight crew stipulates that no license or rating required for any of the personnel of the aircraft shall be issued or renewed unless the applicant undergoes a medical examination with an approved medical authority and satisfies the medical standards as notified by the Director General. This Civil Aviation Requirement specifies: -

(a) The medical requirements in accordance with the provisions of ICAO Annex-1 for grant and renewal of various licenses and ratings;

(b) The procedure to be followed for the medical examinations; and

(c) The approved medical authorities that can conduct the medical examinations.

This CAR is issued under the provisions of Rule 133A of the Aircraft Rules, 1937

With the issue of this CAR, AIC No. 1/1987 and other requirements on the subject stand cancelled.

2. Requirements for Medical Assessment

2.1 An applicant for grant/renewal of a flight crew license/rating shall hold a valid medical assessment issued by DGCA in accordance with the International Standards and Recommended Practices contained in ICAO Annex 1, Chapter 6 and the medical requirements laid down by DGCA.

2.2 An applicant for a Medical Assessment shall undergo a medical examination based on the following requirements:

(a) Physical and mental;

(b) Visual and colour perception; and

(c) Hearing.

2.3 An applicant for any class of Medical Assessment shall be free from:

(a) Any abnormality, congenital or acquired, or

(b) Any active, latent, acute or chronic disability, or

(c) Any wound, injury or sequelae from operation, or

(d) Any effect or side-effect of any prescribed or non-prescribed therapeutic medication taken, such as would entail a degree of functional incapacity which is likely to interfere with the safe operation of an aircraft or with the safe performance of duties.

2.4 All applicants for a Class 1,2 and 3 Medical Assessment shall undergo routine haematological investigation such as Hb, TLC, DLC and routine urine analysis, at the time of initial and renewal medical examinations. Also at initial medical examination radiography of the chest shall be done. Subsequent radiography of the chest will only be undertaken if clinically indicated.

2.5 The visual, colour perception and hearing requirements as laid down in paras 6.2.3, 6.2.4 and 6.2.5 of Chapter 6 of ICAO, Annex-1, shall be followed for all classes of Medical Assessment.

2.6 An applicant is required to hold a particular class of applicable Medical Assessment as given below:

2.6.1 Class 1 Medical Assessment

(a) Class 1 Medical Assessment is required for applicants and holders of:

- Commercial Pilot's License (Aero plane & Helicopter);
- Senior Commercial Pilot's License (Aero plane);
- Airline Transport Pilot's License (Aero plane & Helicopter);
- Flight Navigator's License;
- Student Flight Navigator's License;
- Flight Engineer's License;
- Student Flight Engineer's License;
- Private Pilot's License (Aero plane and Helicopter) privileges are required.

(b) The Standards and Recommended Practices relating to:

(i) Physical and mental requirements;

(ii) Visual requirements; and

(iii) Hearing requirements

As contained in paras 6.3.2, 6.3.3 and 6.3.4 of ICAO Annex.1 respectively, shall be followed for issuance of Class-1 Medical Assessment. In addition, the requirements contained in AIC Nos. 4 of 1995 and 28 of 1999 shall also be complied with. Applicants for initial issue of professional licenses shall undergo Electroencephalography (EEG) also. The EEG will be carried out at AFCME, New Delhi or IAM, Bangalore.

2.6.2 Class 2 Medical Assessment

(a) Class 2 Medical Assessment is required for applicants and holders of:

- Private Pilot License (Aero plane & Helicopter);
- Pilot's License (Glider);
- Pilot's License (Balloons);
- Pilot's License (Microlight);

- Student Pilot's License (Aero plane);
- Student Pilot's License (Helicopter);
- Student Pilot's License (Glider);
- Student Pilot's License (Balloons);
- Student Pilot's License (Microlight);
- Flight Radio Telephone Operator's License;
- Flight Radio Telephone Operator's License (Restricted).

(b) The Standards and Recommended Practices relating to:

(i) Physical and mental requirements;

(ii) Visual requirements; and

(iii) Hearing requirements

As contained in paras 6.4.2, 6.4.3 and 6.**4.4**. Of ICAO Annex-1 respectively, shall be followed for issuance of Class 2 Medical Assessment.

2.6.3 **Class 3 Medical Assessments.** In accordance with ICAO Annex-1, Class 3 Medical Assessment is required for Air Traffic Controllers. The Standards and Recommended Practices relating to:

(i) Physical and mental requirements;

(ii) Visual requirements; and

(iii) Hearing requirements

As contained in paras 6.5.2, 6.5.3 and 6.5.4 of ICAO Annex-1 respectively, shall be followed for issuance of Class 3 Medical Assessment.

2.7 No flight crew shall exercise privileges of a license/rating, unless he holds a valid applicable class of medical assessment.

3. Approved Medical Examination Centres

3.1 Class-1 Medical Examination

3.1.1 The Class -1 medical examination for the issue and renewal of licenses will be carried out by the Medical Boards at the Indian Air Force Centres listed in para 7.2.7, subject to proviso, as hereunder:

Medical Examination		Centre
(i) Initial Issue of License	-	(i) AFCME New Delhi (ii) IAM, Bangalore,
(ii) Every Third year renewal and Every fifth six-monthly renewal as applicable	-	(i) AFCME, New Delhi (ii) IAM, Bangalore, or Any other centre at the discretion of DGCA
(iii) Licenses which have lapsed for a period of over two years		(i) AFCME, New Delhi (ii) IAM, Bangalore,
(iv) After a period of unfitness		(i) AFCME, New Delhi (ii) IAM, Bangalore, or Any other centre at the discretion of DGCA
(v) Where an applicant has not undergone a renewal medical examination for 24 months from the date of the last medical examination	-	(i) AFCME, New Delhi (ii) IAM Bangalore
(vi) Where an applicant has not undergone a renewal medical for 30 months With respect to ALTP and 36 months with Respect to CPL since last medical Examination, the license holder will have to undergo initial issue medical examination	-	(i) AFCME, New Delhi (ii) IAM, Bangalore,

(vii) Special Medical Examination	-	(i) AFCME, New Delhi (ii) IAM, Bangalore, or Any other centre at the discretion of DGCA
(viii) License renewal other than those Specified above	-	At any Centre

3.1.2 The medical examiners who have received training in Aviation Medicine, including the President of the Board, of the aforesaid medical centers are authorised to conduct the medical examinations for fitness of applicants for issue or renewal of licenses or ratings specified in Rule 38 of the Aircraft Rules, 1937. The President of the Board shall submit a written report, under his/her signature to the DGCA for issue of medical assessment. However, he/she will give a medical certificate of fitness or otherwise to the applicant on form CA 35 on completion of the medical examination.

3.1.3 Permanent unfitness of a license holder based on a medical examination conducted at the authorised centres, will be decided after a thorough evaluation by specialists and/ or specialised investigations which will be done only at AFCME, New Delhi or IAM, Bangalore. Such unfitness will be decided by the medical board at these centres and will require approval of DGMS (Air).

3.2 Class-2 and Class 3 Medical Examination

3.2.1 The following authorities can carry out Class-2 and Class-3 medical examinations:

(i) All authorised Class-1 medical authorities;

(ii) All practitioners of modern medicine having a minimum of MBBS qualification and registered with the Medical Council of India and who have received the approved training in the subject of Aviation Medicine at IAM, Bangalore.

3.2.2 The medical authority undertaking a Class-2 or Class-3 medical examination shall submit a written report of medical examination in Form CA-34/34-A as applicable under his/her signature with a seal indicating his

qualifications and registration number of the Medical Council of India. He shall also enclose a self-attested certificate of having undergone a certified course in Aviation Medicine at the Institute of Aero-Space Medicine, Bangalore. The medical examination report shall be forwarded by registered/speed post to:

The Director of Operations,
(Training and Licensing),
Office of the Director General of Civil Aviation,
Technical Centre,
Opposite Safdarjung Airport,
New Delhi - 110 003

4. Procedure and General Requirements for Medical Examination

4.1 An applicant for medical examination should make request for appointment for medical examination directly to the concerned medical examination centre.

4.2 An applicant for medical examination is required to make a written request in the prescribed form to DGCA for despatch of Previous Medical Records (PMRs) to an approved medical examination centre at least 30 days prior to the intended date of medical examination to ensure that the medical records are sent before the due date of examination. Such requests should be addressed to the address given in para 3.2.2.

4.3 Applicants for initial issue of medical fitness assessment are required to produce one passport size dressed photograph of self to be affixed on the front-page right hand top corner of the application form. The photograph shall be stamped by the approved medical authority in such a manner that it appears in the form as well as on the photograph.

4.4 Applicants for issue of Student Pilot License should obtain a Cockpit Test Report from the Chief Flying/Gliding Instructor of the Flying/Gliding Club he proposes to join and submit it to the medical examiner for forwarding to DGCA.

4.5 Applicants shall sign and furnish to the medical examiner a declaration:

(a) Whether they have previously undergone such an examination and, if so, with what result;

(b) Any period of sickness, injury, surgical procedure since the last medical examination;

(c) Whether they are taking any drug or medication.

4.6 Any false declaration to a medical examiner made by an applicant will be considered a serious lapse and shall be reported by the Examiner to DGCA for appropriate penal action.

4.7 Applicants are required to pay the following fees prior to commencement of the medical examination.

(a) Initial issue of license

(Class 1 - Rs.240/-, Class 2 and Class 3 - Rs. 60/-).

(b) Renewal of license

(Class 1 - Rs. 180/-, Class 2 and Class 3 - Rs. 40/-).

In addition, applicants are required to pay for all medical investigations undertaken during the course of medical examination at rates as prescribed by the medical authority.

4.8 Form CA-34 shall be used by the Medical Boards in case of medical examination for initial issue of license and Form 34A for renewal of license. The Medical Board shall also fill up Form C.A.35, a copy of which shall be given to the crewmember. The medical records along with copies of C.A. 35 will be forwarded to DGCA Headquarters (Attn: DDMS (CA), Training & Licensing Directorate), by registered post for issue of the final medical assessment.

4.9 The final medical assessment issued by the Office of DGCA will be reckoned from the date of medical examination (CA-35).

4.10 If the medical Standards prescribed in Chapter 6 of ICAO Annex.1 and those laid down by DGCA, for a particular license/rating are not met, the Medical Assessment shall not be issued or renewed unless the following conditions are fulfilled:

(a) Accredited medical conclusion indicates that in special circumstances the applicant's failure to meet any requirement, whether numerical or otherwise, is such that exercise of the

privileges of the license applied for is not likely to jeopardize flight safety;

(b) Relevant ability, skill and experience of the applicant and operational conditions have been given due consideration; and

(c) The license is endorsed with any special limitation or limitations when the safe performance of the license holder's duties is dependent on compliance with such limitation or limitations.

4.11 No aircrew shall carry out any flying if he has been declared unfit on the basis of medical examination (CA-35) till he receives the satisfactory final assessment issued by the Office of the DGCA.

5. Procedure for Appeal Medical Examination

5.1 In the event of a aircrew being declared temporarily medically unfit for more than three months at a stretch or in aggregate or permanently unfit for issue or renewal of the license, the applicant may appeal to the DGCA for a review of the medical assessment within a period of 90 days from the date of applicant having been declared unfit.

5.2 The appeal shall be addressed to the Director General of Civil Aviation, Technical Centre, Opposite Safdarjung Airport, New Delhi - 110 003 (Attention: Director of Operations - Training & Licensing). The appeal shall be sent by registered post with acknowledgement due or by Speed Post or through a reputed courier company or may be delivered in person to the Receipt & Despatch Section in the O/o DGCA and obtain a receipt for the same. The appeal must be accompanied by the following documents:

(a) All documents in original obtained by the applicant from reputed medical institutions/specialists clearly certifying that the applicant is fit for flying an aircraft, as a pilot or co-pilot with specific reference to the cause of unfitness stated in the medical assessment issued by the Office of the DGCA. The medical practitioner/specialist certifying the fitness in such a case should give sound reasons justifying his opinion.

(b) Reports of the medical examination and results of investigations, in original, conducted by the medical practitioner/ specialist giving the aforesaid certificate.

5.3 The appeal shall be considered by DGCA, and if found justified, it will be referred to DGMS (Air). If adequate medical evidence is provided for medical review, DGMS (Air) may recommend to DGCA an appeal/review medical examination at an annotated place and may also ask for any such investigation/report or opinion of any specialist to determine the fitness of the applicant. In case the appeal for medical review is not found justified, DGMS (Air) will inform DGCA about the same giving the reasons and the aircrew shall be informed accordingly.

5.4 If the medical review is accepted, it shall be carried out at the centre specified for the purpose. The fresh medical examination reports will be considered to assess the medical fitness of the candidate. The result thereof shall be intimated by the Medical Board to the O/o DGCA and the final assessment shall be issued accordingly by DGCA.

Appendix 'B'
(Refers to Chapter 3, para 5 (d))

3rd May 2000

FLIGHT CREW LICENSING CIRCULAR NO. 1 OF 2000

Flying by pilots having medical restrictions

Civil Aviation Requirements, Section 7, Series 'C', Part I dated 26th Aug, 1999 provides in para 2 that an applicant for grant/renewal of a flight crew license/rating shall hold a valid medical assessment issued by the DGCA in accordance with the International Standards and Recommended Practices as contained in ICAO Annex 1, Chapter 6 and the Medical Requirements laid down by the DGCA. Para 1.2.4.8 of Annex 1, however, permits in special circumstances an individual with medical condition(s) to exercise the privileges of his/her license even when he/she fails to meet the required medical standards. In this way, pilots who otherwise due to their medical condition would have been grounded can be retained in a restricted flying status.

2. Aircrew Medical Boarding Centres impose one of the following restrictions on the medical certificate of fitness issued by them, depending upon the medical conditions of the pilots observed by them :

(i) 'Fit to fly as Co-pilot only'

(ii) 'Fit to fly as Pilot-in-Command along with a qualified experienced pilot'.

3. Where the medical certificate of fitness issued by a Medical Boarding Centre or the medical assessment issued by DGCA carries the restriction as mentioned in para 2 (ii) above, the term "experienced pilot" will mean a pilot who :

(a) Has no restrictions due to medical conditions;

(b) Has a current Pilot-in-Command rating on type of aircraft : or a co-pilot meeting the following criteria :

(i) has a minimum of 250 hours of experience on type and currently flying the type of the aircraft;

(ii) has not been held blameworthy for any incident on type during the preceding two years for his /her proficiency in operating that type ;

(iii) has not been held blameworthy for any accident on any aircraft for his/her proficiency in operating an aircraft in the preceding five years;

(iv) has not shown 'Below Standard' performance during proficiency check and/or instrument rating check during preceding two years; and

(v) has a suitability certificate issued after suitability check on aircraft/simulator, by an examiner on type indicating that the co-pilot is fit for handling the aircraft, especially during take-off/ and landing.

4. The provisions of this Licensing Circular came into effect from 01 April 2000.

(Satendra Singh)
JDG
DGCA